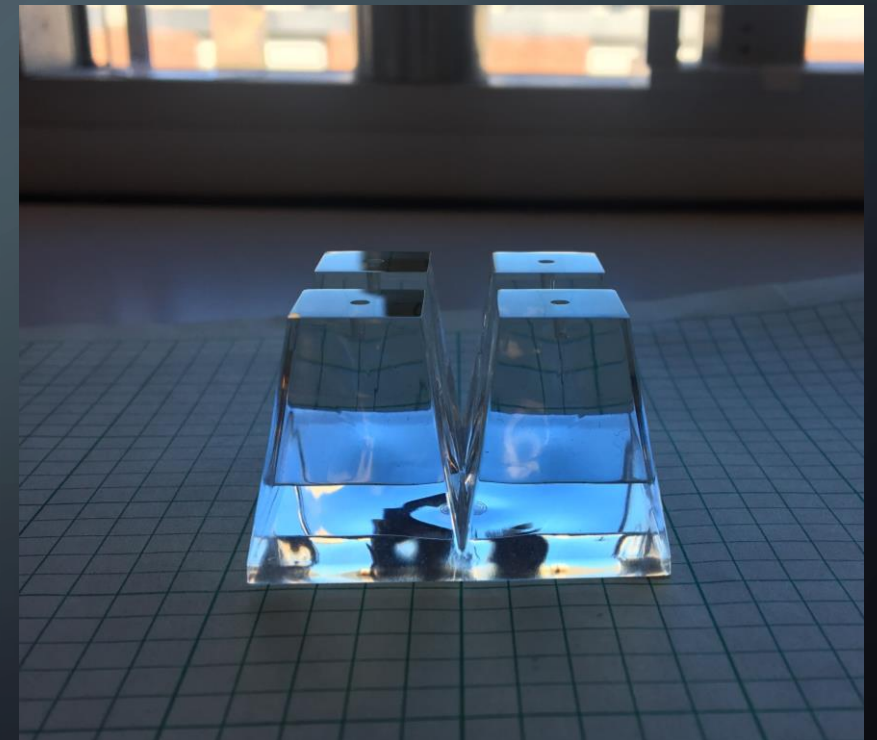


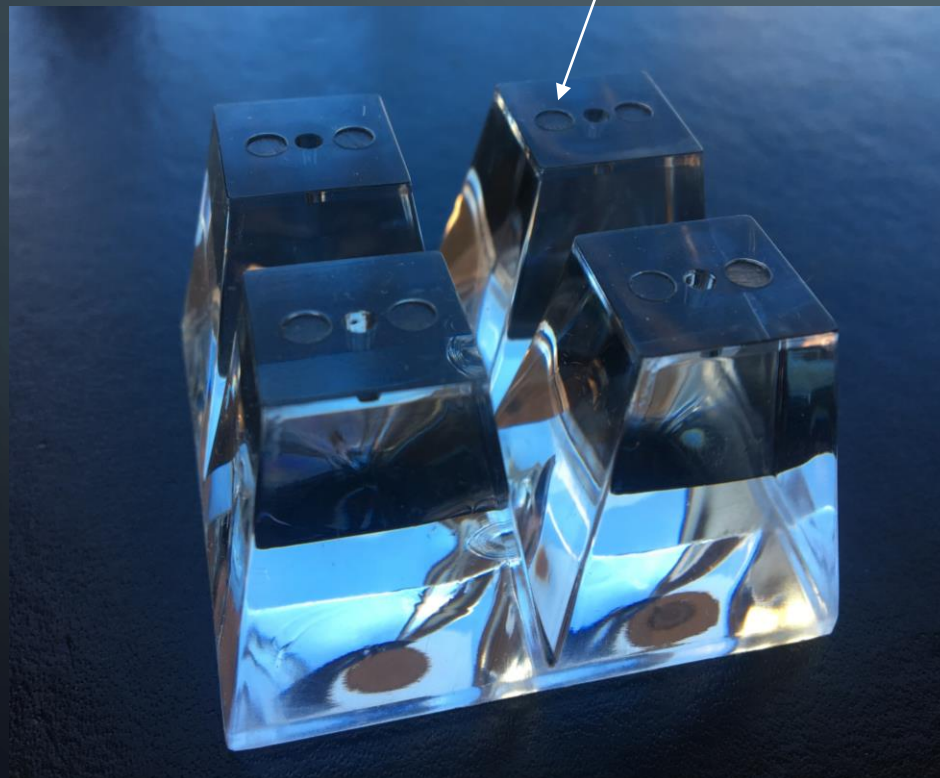
SPHENIX EMCAL WEEKLY MTG – BNL UPDATE



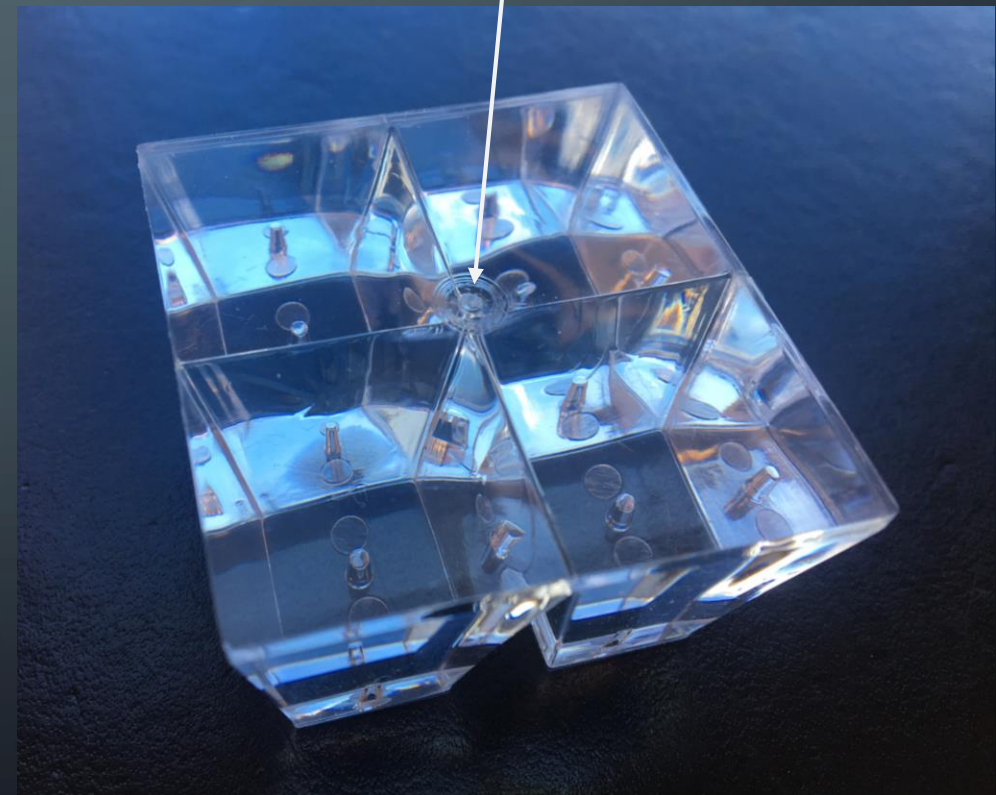
Received 100 injection molded “block 20” quad light guides from ProtoLabs

- ~2 Weeks delivery/turn around time!
- Clarity and surfaces look very good
- Evaluation and testing is ongoing

Mold/casting marks:

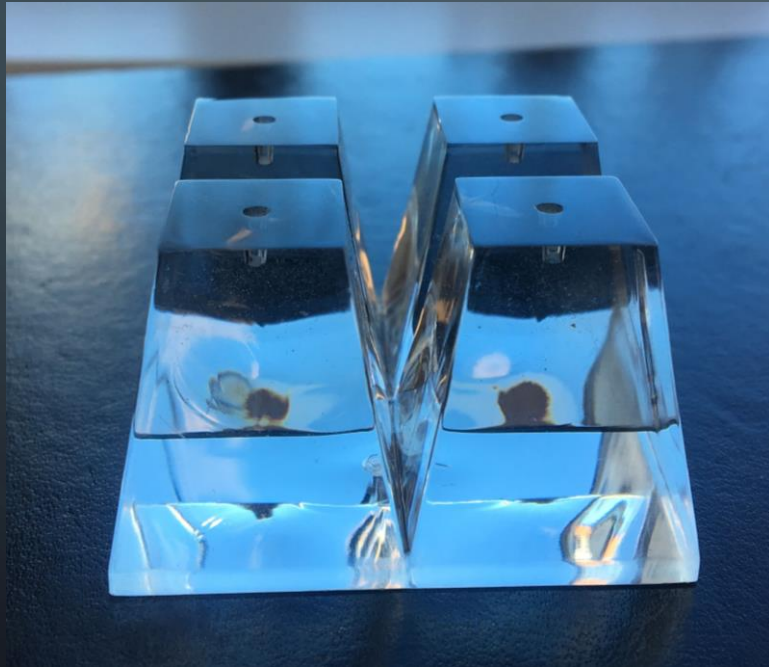
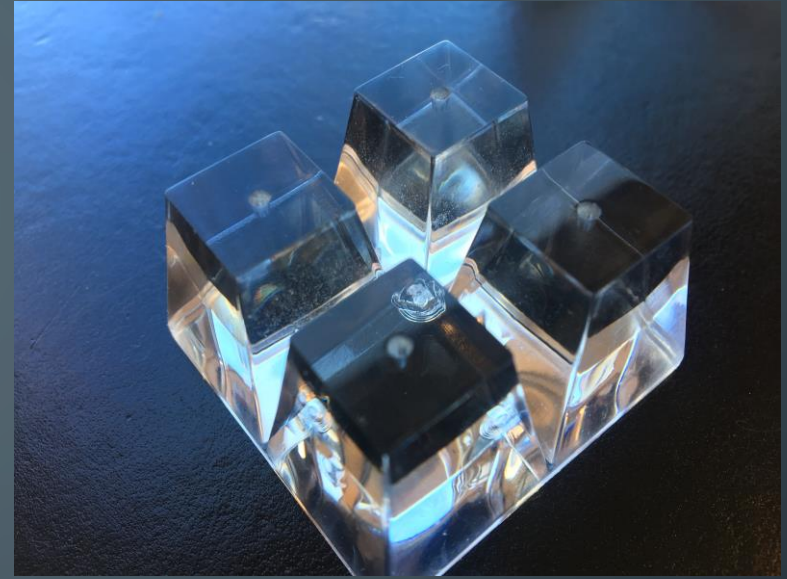


Ejection marks

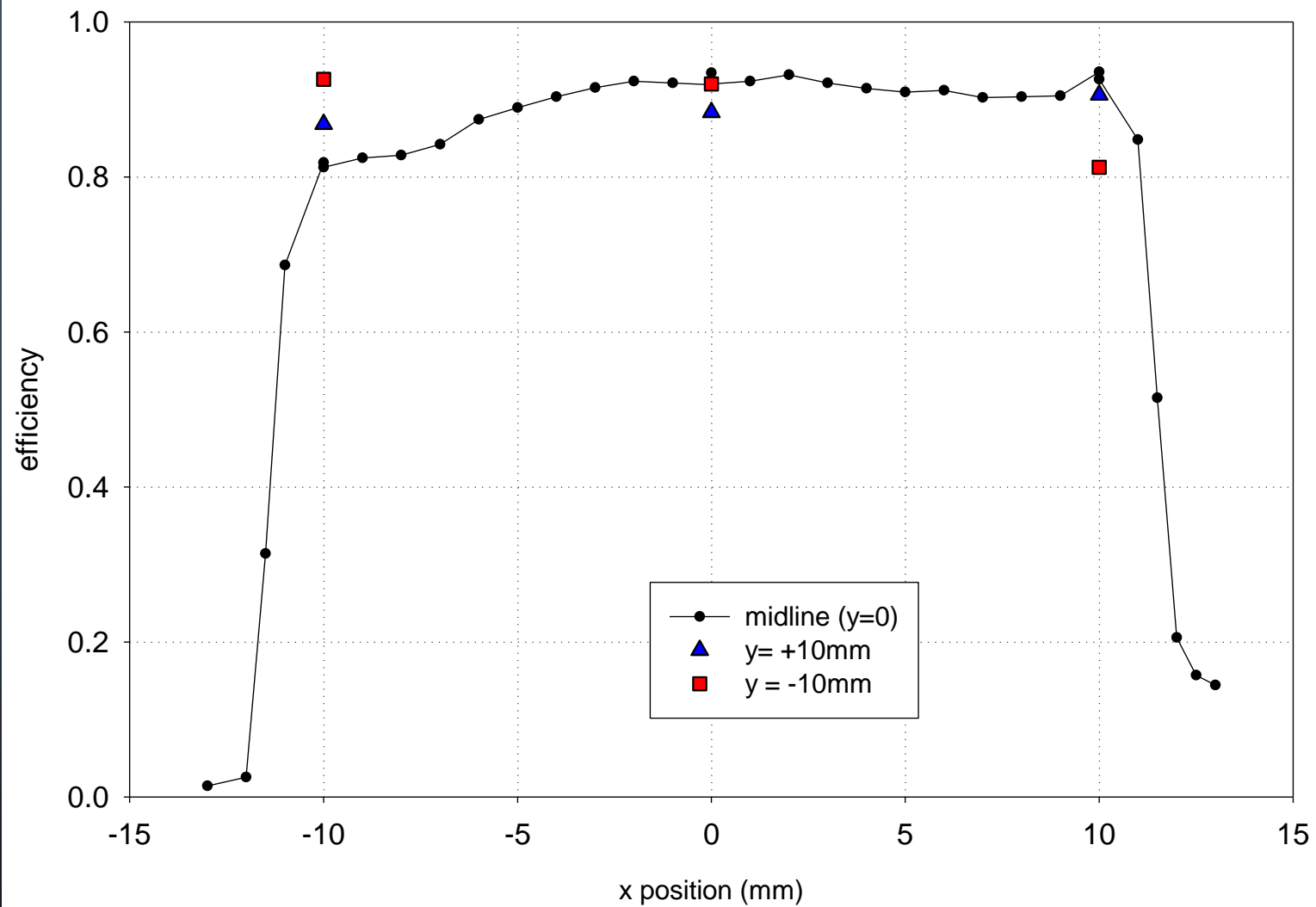


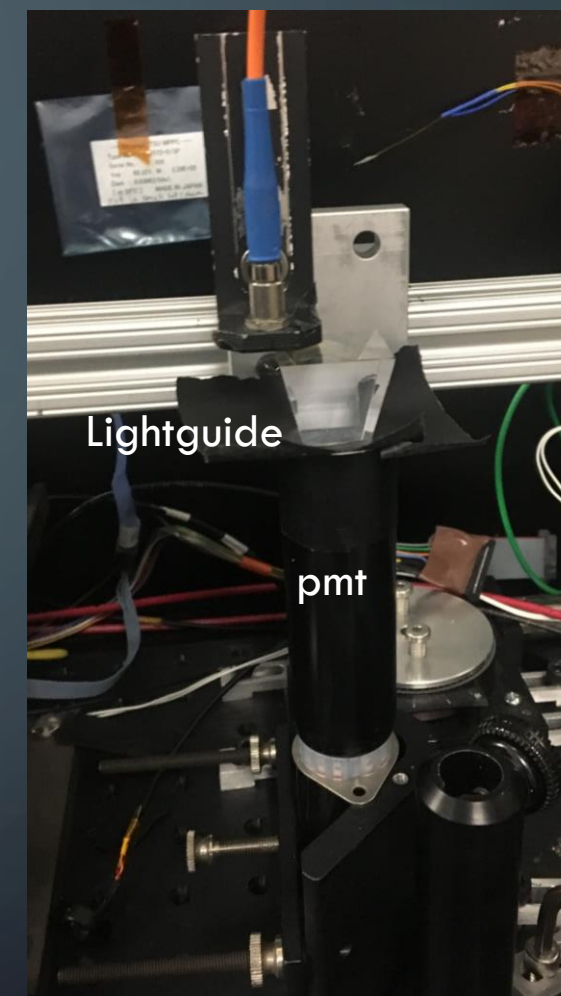
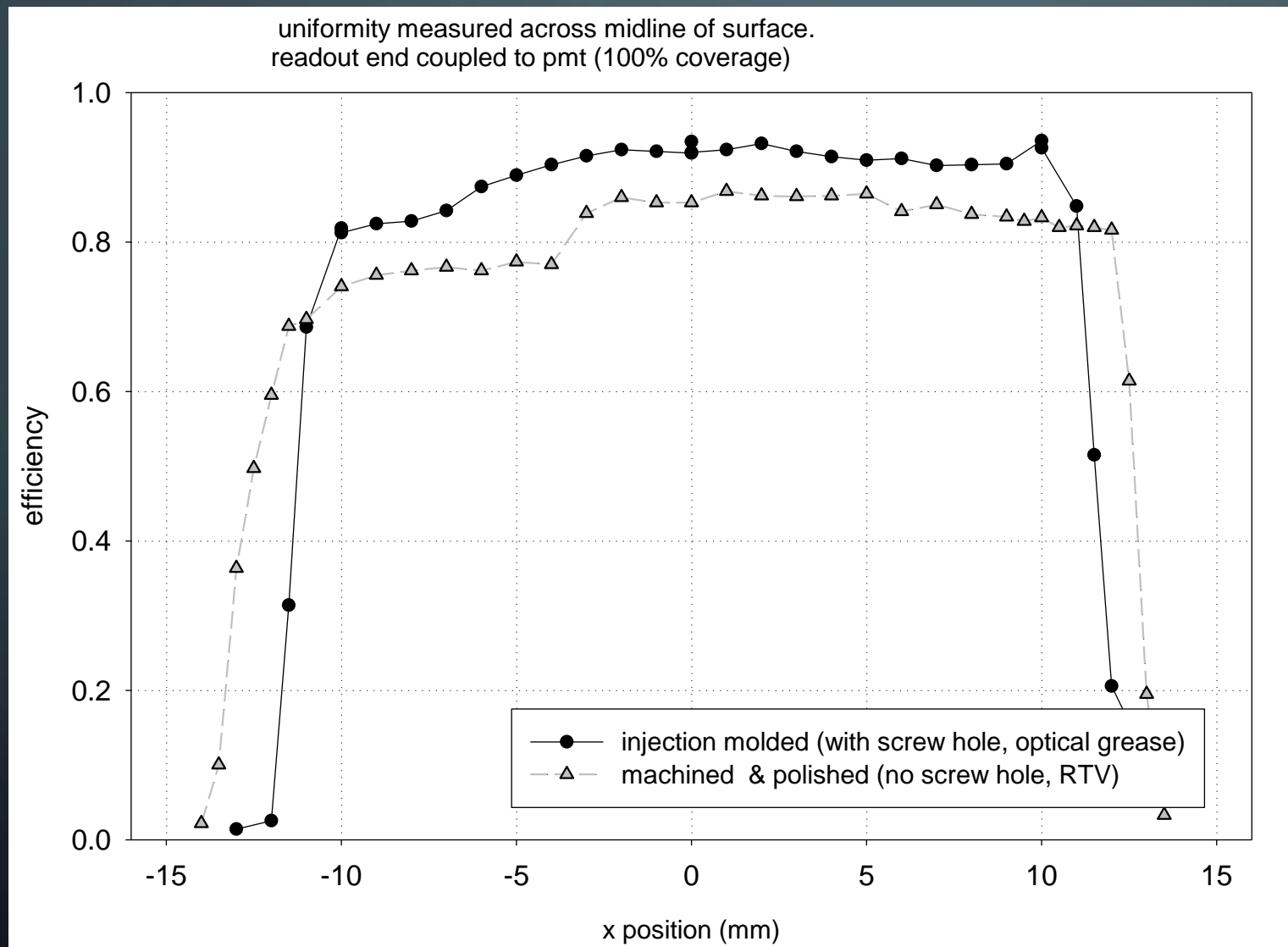
Fill mark

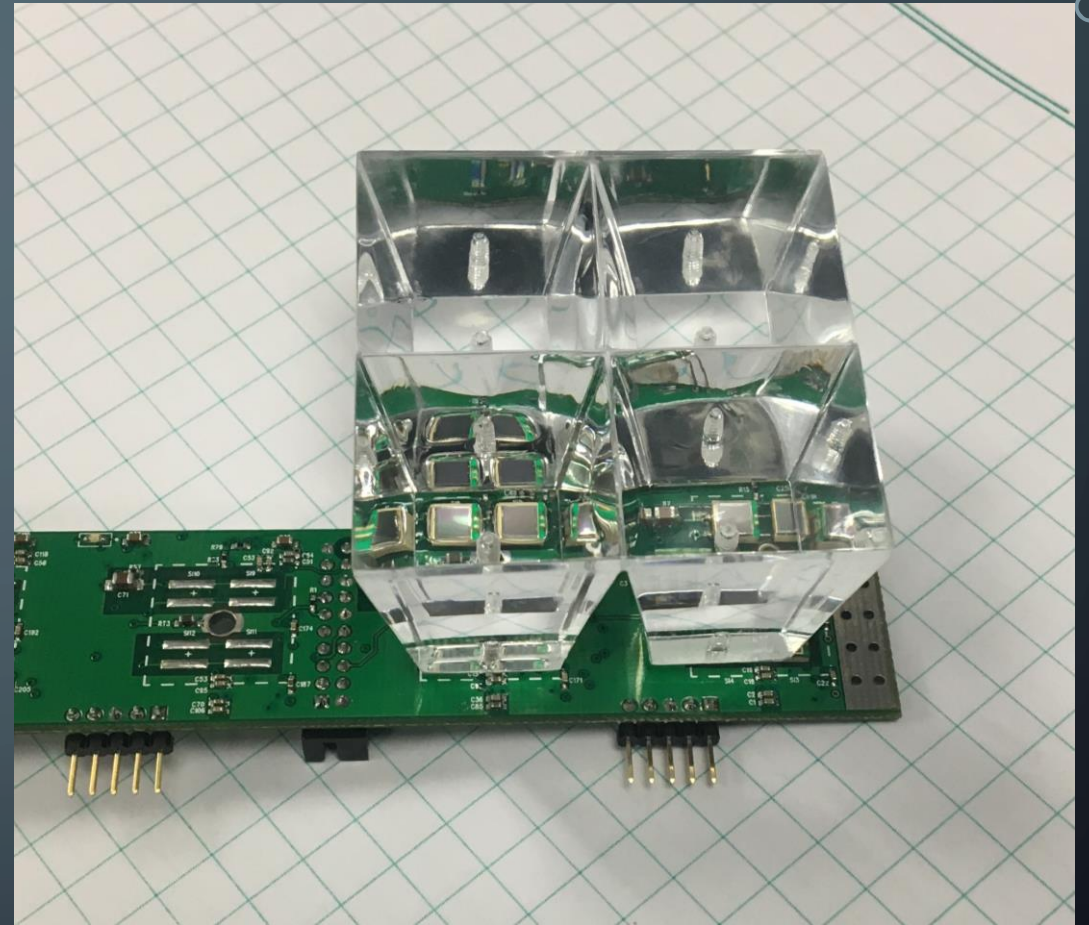
After machining/polishing
Readout surface



Injection molded lightguide - uniformity measured across surface.
readout end coupled to pmt (100% coverage) with BC 630 optical grease.





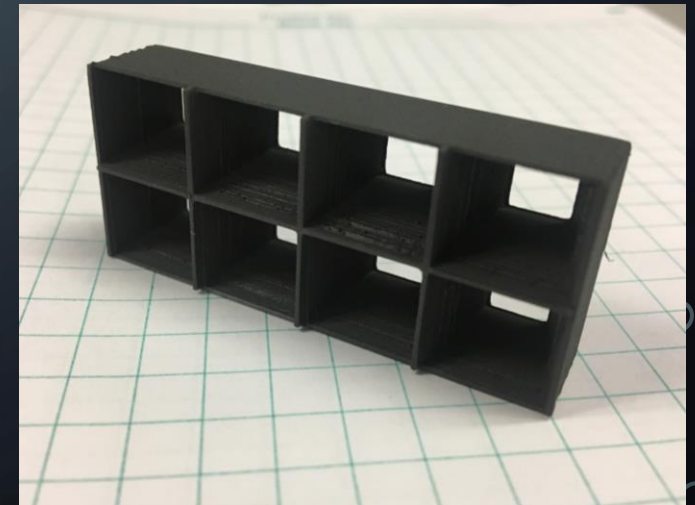
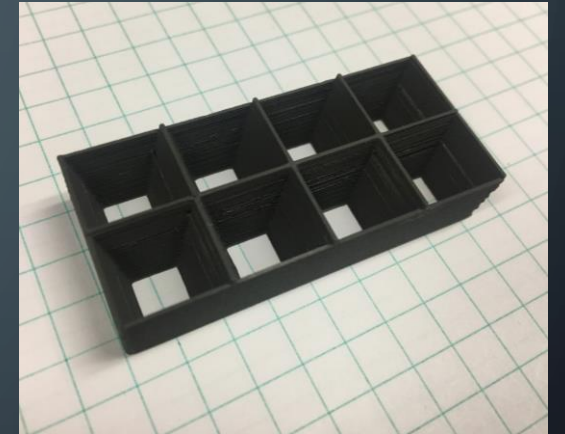
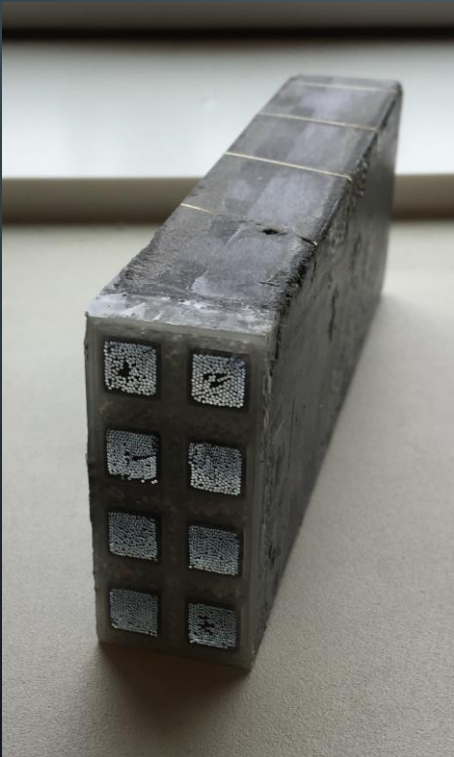


Ongoing - measure uniformity of light collection using sipms on pcb to compare with pmt measurement.

Fiber-bundling insert options—

- tungsten impregnated plastic (4 g/cc) - any benefit? or does it make the block response nonuniformity worse?
- Round or square bundles?
- light collection cavity is next

Measurements of first block ongoing...Martin is automating a second x-y scanning DAQ Test set up.



Cast (fiberless) blocks

“dumbbell” mold

Water soluble mold insert

